Does Teacher Know Best? Comparing Methods of Assigning Pairs for Writing Assignments

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I. Introduction

Large class sizes and the popular idea of collaborative learning often leads writing teachers to have their students complete assignments in pairs or sometimes even larger groups. With this in mind, it is important to consider how to most effectively assign students to pairs or groups. This study is a follow-up to research carried out by the author (Henwood, 2018) that compared two classes of Japanese university writing students that were assigned partners with either similar grades or assigned partners with more diverse grades. The current study examines the issue from a slightly more fundamental level: is there any meaningful difference in results by having the teacher assign pairs instead of letting the students choose their own partners? By not allowing students to merely choose to partner with their friends, teachers give students the opportunity interact with others with different language abilities, perspectives and backgrounds. However valuable this opportunity is, does it produce greater improvement of performance than a student would achieve by choosing their own partner? This study will examine this question.

II. Literature Review

What is collaborative learning and why is it becoming more and more popular? At its essence, in contrast to the standard teacher-centered learning model,

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collaborative learning is when a pair or larger group of people interact with each other and increase their individual learning through the interaction (Dillenbourg, 1999). Gerlach writes, “Collaborate learning is based on the idea that learning is a naturally social act in which the participants talk among themselves (Gerlach, 1994). It is through the talk that learning occurs.” Smith and MacGregor write that, “In a collaborative learning setting, learners have the opportunity to converse with peers, present and defend ideas, exchange diverse beliefs, question other conceptual frameworks, and be actively engaged” (Smith and MacGregor, 1992). Collaborative learning is generally accepted as beneficial for second language acquisition (Slavin, 1996; Johnson and Johnson, 2009) and the Japanese education ministry has made it a focus for junior and senior high school English education (MEXT, 2014). In regards to writing specifically, many researchers have expounded on the benefits of pair writing and collaborative writing (DiCamilla & Anton, 1997; Storch, 2005; Swain & Lapkin, 1998). Biria and Jafari write, “Collaborative writing, which is maximizing learners’ engagement and involvement in language learning practices, has turned into a value-laden, purposeful, and communicative objective” (Biria and Jafari, 2013). This collaboration gives students greater opportunities to improve their language knowledge and abilities. (J. Willis, 1996).

In the author’s previous study (Henwood, 2018) he investigated whether different methods of assigning students to pairs would have any effect on a student’s L2 writing comprehension. Teacher-selected pairs of students with similar grades were compared to teacher-selected pairs of students with very diverse grades. The pairs worked together for an entire semester and completed two paragraph writing assignments together. The pairs were ultimately compared using the results of a final writing comprehension test. Unbeknownst to the students, this was the same test they had taken one semester previously. The results of the study showed no significant statistical difference between the rates of change on the second test between the two groups.

In this new study, the previous methodology was repeated, but instead of comparing two groups of teacher-selected pairs, it compared one group of teacher-selected pairs with one group of student self-selected pairs.

III. Research Question and Hypothesis

The goal of this research was to investigate whether different methods of assigning students to pairs, namely teacher-selected vs student self-selected, would have any effect on a student’s L2 writing comprehension. Therefore, this study addresses the following research question:

1. Does teacher-selected pairing for pair writing activities have a statistically significant effect on how those students perform on an essay writing comprehension test compared to student self-selected pairing?

Based on this research question, the following null hypothesis was designed:

H_0: Teacher-selected pairing for pair writing activities has no statistically significant effect on how those students perform on an essay writing comprehension test compared to student self-selected pairing.

IV. Method

1. Participants

This study involved 46 second year Japanese students in the School of Science and Technology at Kwansei Gakuin University in Japan. The students were in two different sections of a second year compulsory English writing course. The focus of the course is on constructing various types of basic essays in English containing the requisite introductions, thesis statements, body paragraphs, conclusions and concluding statements.

2. Design

The study took place in the second (final) semester of the academic year. Each semester included two assessed writing assignments (one paragraph and one essay in the first semester, two essays in the second semester) and a general essay writing comprehension test. In the first semester, all the students completed their writing assignments alone and were evaluated individually. The students in each class were ranked by their final course grade in the first semester. These rankings were used to determine the pairings for the teacher-selected groups in the second semester.

The teacher-selected groups were each 2 rankings apart according to their final grades in the previous semester. Therefore, students 1 and 3 became a pair, students 2 and 4 became a pair, students 3 and 5 became a pair, etc . . . The final pair included students 22 and 24. This group will hereafter be referred to as *A group* (see Table 1 a). The student self-selected pairs had differences of ranking ranging from 1 to 17. They will hereafter be referred to as *B group* (see Table 1 b).

Table 1a - A Group		
Student #	Final Grade	Pair
1	93.0	A1
2	89.5	A2
3	88.5	A1
4	88.1	A2
5	87.5	A3
6	86.5	A4
7	84.5	A3
8	83.0	A4
9	81.5	A5
10	80.5	A6
11	79.6	A5
12	79.5	A6
13	78.9	A7
14	77.0	A8
15	77.0	A7
16	76.1	A8
17	73.0	A9
18	69.0	A10
19	68.2	A9
20	67.0	A10
21	64.0	A11
22	63.5	A12
23	60.0	A11
24	58.0	A12

Table 1b - B Group		
Student #	Final Grade	Pair
25	94.5	B1
26	89.5	B2
27	89.0	B3
28	88.0	B4
29	87.5	B5
30	87.5	B2
31	87.5	B1
32	86.3	B4
33	86.0	B6
34	85.5	B7
35	85.5	B6
36	85.0	B8
37	84.5	B9
38	83.0	B9
39	82.7	B8
40	75.5	B10
41	75.5	B10
42	74.5	B7
43	71.5	B11
44	66.0	B3
45	64.0	B5
46	24.9	B12

A Group pairs were differentiated by small differences in their first semester final grades (see Table 2 a). The differences ranged from 0.9-5.5%, with an average difference of 2.9%. On the other hand, B group pairs were differentiated by varying differences, quite substantial in some cases (see Table 2 b). B Group differences ranged from 0-46.6% with an average difference of 10.8%. These numbers are skewed due to the fact that student #46 received a very low failing grade in semester one but was allowed to continue into the second semester. However, even ignoring student #46's grade in the calculations, B Group's average difference is still 7.3%, which is significantly higher than A Group.

Table 2a - Differences	
Pairs	Difference
A1	4.5
A2	1.4
A3	3
A4	3.5
A5	1.9
A6	1
A7	1.9
A8	0.9
A9	4.8
A10	2
A11	4
A12	5.5
Average	**2.9**

Table 2b - Differences	
Pairs	Difference
B1	7.0
B2	2.0
B3	23.0
B4	1.7
B5	23.5
B6	0.5
B7	11.0
B8	2.3
B9	1.5
B10	0.0
B11	46.6
Average	**10.8**

Both groups were given three classroom periods (4.5 hours in total) to collectively brainstorm, make an outline, write two rough drafts and complete a final draft using suggestions from a peer-review activity, for each of two essay writing assignments. Because the students were evaluated in pairs on their writing assignments, and it would be difficult to parse each individual student's contribution, this study used their individual scores on the two final exams to judge the efficacy of the different pairing methods. The first semester final exam had only one section which presented questions on the parts of an essay, correct essay formatting, and questions about the writing process. The exact same questions appeared on the first section of the second semester final exam (unbeknownst to the students beforehand) which allows for a direct comparison of their essay writing comprehension skills from both semesters. The second semester final exam also featured questions on APA citations which were only introduced to the students in the second semester, and the results of this section will also be examined for completeness.

V. Results

The mean score on A Group's first test was 61%. The mean score on the identical second test was 75%. The mean of the change in results (both positive and negative) from the first test to the second was 0.15 or 15% (see Table 3 a).

The mean score on B Group's first test was 65%. The mean score on the identical second test was 76%. The mean of the change in results (both positive and negative) from the first test to the second was 0.13 or 13% (see Table 3 b).

Table 3a - Change in Results				
Student #	Pair	Test 1	Test 2	% Change
1	a01	85%	80%	5%
3	a01	70%	80%	10%
2	a02	75%	85%	10%
4	a02	70%	80%	10%
5	a03	65%	80%	15%
7	a03	55%	75%	20%
6	a04	90%	90%	0%
8	a04	60%	70%	10%
9	a05	70%	80%	10%
11	a05	70%	85%	15%
10	a06	40%	60%	20%
12	a06	55%	80%	25%
13	a07	80%	85%	5%
14	a07	40%	65%	25%
15	a08	60%	90%	30%
16	a08	40%	75%	35%
17	a09	55%	75%	20%
19	a09	55%	70%	15%
18	a10	60%	55%	5%
20	a10	60%	80%	20%
21	a11	65%	70%	5%
23	a11	45%	65%	20%
22	a12	50%	60%	10%
24	a12	40%	65%	25%
	Mean	**61%**	**75%**	**15%**

Table 3b - Change in Results				
Student #	Pair	Test 1	Test 2	% Change
25	B01	90%	90%	0%
31	B01	75%	90%	15%
26	B02	70%	75%	5%
30	B02	65%	85%	20%
27	B03	65%	80%	15%
44	B03	55%	65%	10%
28	B04	75%	65%	10%
32	B04	45%	75%	30%
29	B05	85%	85%	0%
45	B05	40%	65%	25%
33	B06	60%	70%	10%
35	B06	50%	55%	5%
34	B07	60%	80%	20%
42	B07	65%	95%	30%
36	B08	60%	75%	15%
39	B08	80%	90%	10%
37	B09	55%	70%	15%
38	B09	65%	65%	0%
40	B10	90%	85%	5%
41	B10	80%	75%	5%
43	B11	50%	65%	15%
46	B11	55%	80%	25%
	Mean	**65%**	**76%**	**13%**

Running a t-test on the percentage of change from test 1 to test 2 for each group gives a p-value of 0.39, so there was no statistically significant difference between the two groups.

The second semester final exam included additional questions not on the first semester exam. These questions tested students on their ability to correctly cite an article using the APA system of citations. Comparing the students results on the first semester exam with the complete second semester exam yielded the following results: the mean score on A Group's first test was 61%. The mean score on the complete second test was 70%. The mean of the change in results (both positive and negative) from the first test to the second was 0.14 or 14% (see Table 4 a).

The mean score on B Group's first test was 65%. The mean score on the complete second test was 77%. The mean of the change in results (both positive and negative) from the first test to the second was 0.14 or 14% (see Table 4 b).

Table 4a - Change in Results				
Student #	Pair	Test 1	Test 2+	% Change
1	a01	85%	72%	13%
3	a01	70%	68%	2%
2	a02	75%	84%	9%
4	a02	70%	76%	6%
5	a03	65%	76%	11%
7	a03	55%	76%	21%
6	a04	90%	76%	14%
8	a04	60%	72%	12%
9	a05	70%	64%	6%
11	a05	70%	68%	2%
10	a06	40%	64%	24%
12	a06	55%	84%	29%
13	a07	80%	72%	8%
14	a07	40%	72%	32%
15	a08	60%	88%	28%
16	a08	40%	76%	36%
17	a09	55%	60%	5%
19	a09	55%	72%	17%
18	a10	60%	56%	4%
20	a10	60%	68%	8%
21	a11	65%	76%	11%
23	a11	45%	60%	15%
22	a12	50%	52%	2%
24	a12	40%	52%	12%
	Mean	**61%**	**70%**	**14%**

Table 4b - Change in Results				
Student #	Pair	Test 1	Test 2+	% Change
25	B01	90%	92%	2%
31	B01	75%	92%	17%
26	B02	70%	80%	10%
30	B02	65%	84%	19%
27	B03	65%	84%	19%
44	B03	55%	72%	17%
28	B04	75%	68%	7%
32	B04	45%	72%	27%
29	B05	85%	88%	3%
45	B05	40%	68%	28%
33	B06	60%	72%	12%
35	B06	50%	56%	6%
34	B07	60%	84%	24%
42	B07	65%	96%	31%
36	B08	60%	60%	0%
39	B08	80%	92%	12%
37	B09	55%	76%	21%
38	B09	65%	64%	1%
40	B10	90%	88%	2%
41	B10	80%	68%	12%
43	B11	50%	65%	15%
46	B11	55%	80%	25%
	Mean	**65%**	**77%**	**14%**

Running a t-test on the percentage of change from test 1 to the complete test 2 for each group gives a p-value of 0.87, so there was no statistically significant difference between the two groups.

VI. Discussion and Conclusion

The null hypothesis for this study was H_0: Teacher-selected pairing for pair writing activities had no statistically significant effect on how those students performed on a paragraph writing comprehension test compared to student self-selected pairing. For the null hypothesis to be disqualified, the p-value for at least one comparison test must be less than the significance level of 0.05. However, all of the p-values observed in the study were greater than 0.05 so the null hypothesis cannot be rejected.

While there may be many benefits for students by making teacher-selected pairs for writing activities, this study shows that this method will likely not make any significant improvements of students' writing comprehension skills compared to simply letting students choose their own partners.

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